

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference MRH/P103062WO	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/GB2004/005457	International filing date ( <i>day/month/year</i> ) 29 December 2004 (29.12.2004)	Priority date ( <i>day/month/year</i> ) 30 December 2003 (30.12.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant GLASSFLAKE LTD			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

		Date of issuance of this report 03 July 2006 (03.07.2006)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland		Authorized officer  Nora Lindner
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# PATENT COOPERATION TREATY

REC'D 19 APR 2005

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From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/GB2004/005457

International filing date (day/month/year)  
29.12.2004

Priority date (day/month/year)  
30.12.2003

International Patent Classification (IPC) or both national classification and IPC  
C03B37/005

Applicant  
GLASSFLAKE LTD

#### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

#### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

#### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

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**Box No. 1 Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-4
	No: Claims	-
Inventive step (IS)	Yes: Claims	4
	No: Claims	1-3
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	-

2. Citations and explanations

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

The following document is referred to :

D1 : EP-A-0289240

1. As far as **claim 1** can be understood (see Item VIII § 4. below), its subject-matter does not imply an inventive activity in the sense of Article 33(1), (3) PCT.

1.1. Document D1, which is considered as the closest prior art, discloses a method for changing the thickness of flakes (claim 8, col.2, l. 26-31, col. 4, l. 28-41, col. 4, l. 58 - col. 5, l.8) which comprises feeding a stream of molten material in a downwards direction into a rotating cup or disc, and allowing the material to pass over the edge of the cup in such a manner as to be forced into the gap between a pair of plates surrounding the cup, the movement of the material being maintained in an angular direction and effected by a flow of air passing through the plates and either side of the material so as to pull the stream of material in such a manner as to keep it flat and also to pull it so that, as solidification of the material is effected, the sheet of material so formed is broken into flakes.

It is to be noticed that the expression "particle thickness size distribution" of claim 1 encompasses several meanings, including the general meaning of "thickness of flakes".

Claim 1 of the present application differs from the process of D1 in that the distance between the cup and the entrance to the gap between the plates is varied.

1.2. The effect of the varying distance between the cup and the entrance to the gap is to change the thickness of the flakes. As other parameters are known from D1 to influence the thickness of the flakes, the problem to be solved can be seen as how to find an alternative to the known method. As the skilled person would expect that the modification of this distance would to a certain extent affect the thickness of the flakes, the solution of **claim 1** is considered to be obvious.

2. Dependent claims 2 and 3 are not considered to meet the requirements of Article 33(1), (3) in respect of inventive step, for the following reasons :
  - 2.1. The range of **claim 2** results from the optimization of the distance between the cup and the plates and is not regarded as inventive.
  - 2.2. The wording of **claim 3** is so unclear ("the particle size distribution is in the range from 10% to 95%") that it does not further define the particle size distribution. Hence no distinguishing technical feature can be derived from it.
3. The subject-matter of **claim 4** is considered to meet the requirements of Article 33(1) PCT in respect of novelty and inventive activity (Article 33(2), (3) PCT). The reasons are the following :

It is clear from claim 4 that the effect of varying the distance between the cup and the plates is to change the width of the particle thickness size distribution, thus to achieve a narrower or a wider particle thickness size distribution.

Hence the difference between claim 4 and the method of D1 (see § 1.1. above) is that the width of the particle thickness size distribution is modified when the distance between the cup and the plate is changed. The problem of obtaining a narrow particle thickness size distribution is addressed in the art but for other processes for making flakes, and is solved by equalizing temperatures (see eg. the A-documents cited in the search report). Hence the skilled person trying to modify the process of D1 in order to change the width of the particle thickness size distribution would not find it obvious to modify the distance between the cup and the plates.

#### **Re Item VIII**

#### **Certain observations on the international application**

4. The present application does not meet the requirements of Article 6 PCT because the wording of **claim 1** does not allow to define the subject-matter of the claims. It seems that the steps of the process described in the sentence "flakes of material formed by a process which comprises (...) broken into flakes" are not part of the claimed subject-matter, although part of the related features are necessary for defining the method step of changing the thickness size distribution ("distance between the cup and the entrance

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AUTHORITY (SEPARATE SHEET)**

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of the gap"). Hence a lack of clarity arises (see Guidelines 5.37).